



PATENT
COR00272P00060US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application Of:) HORIZONTAL COIN DISPENSER
)
Edward J. McGunn et al.)
)
Serial No.: 10/623,624) Group Art Unit: 3653
)
Filed: July 21, 2003) Examiner: Jeffrey A. Shapiro

LETTER OF TRANSMITTAL

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Sir:

Attached is Appellants' Brief on Appeal in support of the Notice of Appeal filed April 10, 2008. The filing fee of \$255.00 has previously been submitted; however, if any additional fees are incurred as a result of the filing of this paper, authorization is given to charge Deposit Account Number 23-0785.

Respectfully submitted,

Date: June 10, 2008


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Signature: 

Corinne Byk



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Serial No.: 10/623,624)	
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APPELLANTS' BRIEF ON APPEAL

Mail Stop Appeal Briefs - Patent
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

Sir:

This brief is in support of the Notice of Appeal in the above filed April 10, 2008.

REAL PARTY IN INTEREST

The real party in interest is Corporate Safe Specialists, Inc., the assignee of the application.

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RELATED APPEALS AND INTERFERENCES

There are no related appeals and interferences.

STATUS OF THE CLAIMS

Claims 1-20 are pending in the application, are rejected, and are at issue in the appeal.

The claims are set forth in the Claims Appendix.

STATUS OF AMENDMENTS

No amendments was filed subsequent to the last rejection.

SUMMARY OF CLAIMED SUBJECT MATTER

Claim1 defines a coin dispensing system 10 comprising a drawer 20 for supporting vertical tubes of currency, see page 6, line 3 and Fig. 1. Means are provided for withdrawing tubes of currency from the drawer. Particularly, the specification describes a dispenser 44 is positioned at the front of the drawer, see col. 6, lines 9-12 and Fig. 2. The dispenser 44 comprises a semi-cylindrical housing 74 having a knob 80. The knob 80 can be turned so that the semi-cylindrical housing 74 is open to the rear to receive a tube T and can then be rotated 180° so that the tube T can be withdrawn from the dispenser 44, see page 7, lines 7-12 and Fig. 4. A sensor comprises a magnet 110 which slides along an associated row of magnetic switches 116, see page 9, lines 7 and 8, and Fig. 5. A resistor network 118, see Fig. 6, is provided for sensing position, see page 9, lines 9-16. A controller 122 senses the output from the

resistor network 118, see page 11, lines 13 and 14 and Fig. 8. A control circuit in the form of the controller 122 and personal computer 22 determines quantity of currency in the drawer, see page 13, lines 20 and 21 and Figs. 8 and 9.

Claim 5 depends from claim 1 and specifies that the withdrawing means comprises a semi-cylindrical housing for receiving a vertical tube of currency and means for rotating the housing for dispensing the vertical tube of currency. Particularly, as described in the specification, a fastener 78 secured to the bottom wall 76 is received in a slot 70 to allow for rotation of the dispenser 44 by turning a knob. The knob can be turned so that the tube T can be withdrawn from the dispenser 44. See page 7, lines 7-12 and Fig. 4.

Claim 7 defines a coin dispensing system comprising a drawer, see page 6, line 3 and Fig. 1. The drawer includes a bottom wall 30 connected to opposite side walls 32 and 34. Spaced dividers 38 define eight columns 40 for receiving vertical tubes T of currency, see page 6, lines 6-9 and Fig. 2. A plurality of dispensers 44 are provided, one for each column, see col. 6, lines 9-12 and Fig. 2. Each dispenser is for withdrawing tubes of currency from an associated column, see page 7, lines 7-12 and Fig. 4. A plurality of sensors, one for each column, comprise magnets 110 which slides along an associated row of magnetic switches 116, see page 9, lines 7 and 8, and Fig. 5. A resistor network 118, see Fig. 6, is provided for sensing position, see page 9, lines 9-16. A controller 122 senses the output from the resistor network 118, see page 11, lines 13 and 14 and Fig. 8. A control circuit in the form of the controller 122 and personal computer 22 determines quantity of currency in the drawer, see page 13, lines 20 and 21 and Figs. 8 and 9.

Claim 16 defines a coin dispensing system comprising a drawer, see page 6, line 3 and Fig. 1. The drawer includes a bottom wall 30 connected to opposite side walls 32 and 34. Spaced dividers 38 define eight columns 40 for receiving vertical tubes T of currency, see page 6, lines 6-9 and Fig. 2. A plurality of pushing plates 46 are provided, one for each column, see page 6, lines 10-11. A spring 100 biases each pushing plate forward, see page 8, lines 4-6 and Fig. 4. A magnet 110 is on each of the pushing plates, see page 8, lines 15-17. A plurality of magnet operated switches 116 are spaced along each column to sense position of the associated magnet, see page 9, lines 7 and 8, and Fig. 5. A plurality of impedance networks 118, one for each column, are each electrically connected to the plurality of magnet operated switches 116 for the associated column so that voltage of the impedance network varies with position of the associated pushing plate, see page 9, lines 9-16. A controller 122 senses the output from the impedance network 118, see page 11, lines 13 and 14 and Fig. 8. A control circuit in the form of the controller 122 and personal computer 22 determines quantity of currency in the drawer, see page 13, lines 20 and 21 and Figs. 8 and 9.

Claim 19 depends from claim 16 and specifies the dispenser 44 for each column comprising a semi-cylindrical housing 74 for receiving a vertical tube of currency. Means are provided for rotating the housing for dispensing the vertical tube of currency. Particularly, as described in the specification, a fastener 78 secured to a bottom wall is received in a slot 70 to allow for rotation of the dispenser 44 by turning a knob 80. See page 7, lines 7-12 and Fig. 4.

GROUND OF REJECTION TO BE REVIEWED ON APPEAL

1. Whether claims 1-4, 6-9, 11-18 and 20 are obvious over Jo et al. U.S. application 2003/0141265A1 (hereinafter Jo) in view of Mignault U.S. Patent No. 6,269,285 (hereinafter Mignault) in view of Delbrouck U.S. Patent No. 4,269,326, further in view of Pullen U.S. Patent No. 6,220,463 and still further in view of O'Brien et al. U.S. Patent No. 6,415,953 (hereinafter O'Brien)?
2. Whether claims 5, 10 and 19 are obvious over Jo in view of Mignault and further in view of Delbrouck, Pullen, O'Brien and Carter U.S. Patent No. 6,934,688?

ARGUMENT

The claims of the application were previously rejected as obvious principally based on Jo in view of Mignault. Thereafter, applicant had filed a Notice of Appeal and an Appeal Brief. Responsive to the Appeal Brief, the present Office action issued reopening prosecution. This is a tacit admission that no combination of Jo and Mignault disclosed or suggested the claimed invention. The new ground of rejection has added three new references, namely, Delbrouck, Pullen and O'Brien. However, these references do not disclose the deficiencies of Jo and Mignault so that the rejection remains improper.

GROUND 1

Claims 1-4, 7-9 and 13.

Independent claim 1 specifies a coin dispensing system comprising a drawer for supporting vertical tubes of currency. Means are provided for withdrawing tubes of currency from the drawer. A sensor senses quantity of tubes in the drawer. A control system is operatively associated with the sensor for determining quantity of currency in the drawer.

Independent claims 7 differs in specifying further details of the drawer as including a bottom wall connected to opposite side walls and a plurality of spaced dividers between the opposite side walls defining a plurality of columns for supporting vertical tubes of currency. Claim 7 also specifies a plurality of dispensers, one for each column each for withdrawing tubes of currency from an associated column. A plurality of the sensors are provided, one for each column, each for sensing quantity of tubes in the associated column. A control system is operatively associated with the sensors for determining quantity of currency in the drawer.

The action does not give any weight to the reference to a coin dispensing system because it is in the preamble. However, the body of the claims recites structure relating to dispensing currency and determining quantity of currency in a drawer. Thus the preamble limitations should not be ignored.

None of the references, alone or in combination, relates to a coin dispensing system used with tubes of currency. The references do not disclose or suggest a drawer for supporting tubes of currency, or means for withdrawing tubes of currency from a drawer (claim

1) or a dispenser for withdrawing tubes of currency (claim 7), or a sensor for sensing quantity of tubes in the drawer. Moreover, the references do not disclose or suggest determining quantity of currency in a drawer.

Jo relates to a merchandise display device arranging articles in a row with a pusher device for pushing the articles forward. Jo does not disclose or suggest supporting vertical tubes of currency. Nor does Jo disclose or suggest a means for withdrawing any articles from the drawer, let alone tubes of currency. The action cites Delbrouck for the use of drawers or shelves and O'Brien for disclosing a means for withdrawing an article. Combining these references with Jo does not avoid the deficiencies noted above.

It is not apparent why Pullen is cited. However, Pullen does not disclose any of the deficiencies noted above.

The action admits that Jo does not disclose sensing of quantities of tubes in a drawer or a control system for determining quantity of currency in a drawer.

Mignault is directed to a system for monitoring a self-service freezer. A spring supports a storage bin for holding articles. A magnet is located on each storage bin and reed switches sense location of the storage bin. A computer system then determines product stack height which can be used to determine inventory requirement. Particularly, the stack height is transmitted to an inventory control center.

The references are not properly combined. Mignault uses a vertical pusher plate and a freezer chest, while Jo uses a horizontal pusher plate for a merchandise display device.

These devices are not analogous. Moreover, Mignault teaches away from the combination by noting at col. 2, lines 10-12 that:

“Presently, conventional inventory monitoring systems for coin-operated vending systems are not compatible with self-service freezer chests.”

The structure in Jo for moving articles forward corresponds somewhat to that in a coin operated vending machine (see O’Brien) as described in Mignault. Thus, Mignault teaches away from the combination.

Mignault does not disclose or suggest determining any dollar value. The stack height information can be used to determine weight in a stack represented by vertical position of each stack. Whether or not an individual stack needs to be replenished does not relate to quantity of currency in a drawer. Particularly, the claimed invention determines quantity of currency in the drawer, not stack height or weight in a particular column.

Even if the references were properly combined, the resultant combination would not relate to the claimed invention. The action, in supporting the combination, states that the inventory information in Mignault is construed as including a quantity of items and/or dollar value. There is no basis for such a statement. The express purpose of the system in Mignault, as described at cols. 1 and 2, is to have a delivery man only proceed to stops on a route as necessary to maintain inventory requirements. Also, the delivery man can avoid overstocking the delivery truck. There is no discussion in Mignault regarding the cost of items or inventory. Rather, the purpose in Mignault is to advise a delivery man when a particular product needed replenishing. Particularly, as stated beginning at col. 2, line 66:

The improved freezer chest and inventory monitoring system of the present invention substantially reduces the problems associated with restocking and operating conventional self-service freezer chests.

Sending a signal representing the weight in each stack, representing fullness of the stack, does not correlate to any representation of dollar value. Indeed, dollar value of the product is not relevant to the system of Mignault.

As is apparent, none of the five references cited in the action relate to dispensing currency. They instead at most relate to dispensing generalized articles. As such, no combination of the references results in a control system determining quantity of currency in a drawer.

The obviousness rejection of independent claims 1 and 7, and likewise dependent claims 2-4, 8, 9 and 13 is improper and ought be reversed.

Claims 6 and 11.

Claims 6 and 11 depend from claims 1 and 7, respectively, and specify the control system stores information representing value of currency in each vertical tube of currency and determines of quantity of currency in the drawer responsive to the sensed quantity and the stored information. There is no disclosure or suggestion of any such control system in Jo or Mignault or the other references. As noted above, Mignault discloses transmitting stack height information for each stack. This can be used with a look up table to determine whether replenishment is required, it does not correspond to storing information representing value of currency in each

vertical tube and determining quantity of currency in a drawer responsive to sensed quantity and stored information.

Claims 6 and 11 are not obvious.

Claim 12.

Claim 12 depends on claim 11 and specifies that the control system includes a display displaying vertical tubes of currency in each column and value of currency in each column.

None of the references discloses any display. At most, Mignault discloses an inventory control center. However, it does not disclose what type of information is used by the inventory control system itself, other than stack height information. Mignault does not disclose any details of the inventory control center other than it receives the stack height data.

Claim 12 is not obvious.

Claim 14.

Claim 14 depends from claim 13 and specifies that the control system comprises a resistor network for each column electrically connected to the plurality of magnet operated switches for the associated column so that voltage of the resistor network varies with the position of the pushing plate.

None of the references disclose or suggest a resistor network. The action states that Mignault's reed switch network is functionally equivalent to a resistance network. There is

no basis for such a statement. In Fig. 6, Mignault discloses that each reed switch is connected to its own sensor interface which are in turn individually connected to an analog digital converter connected to a controller. This does not suggest a resistor network. Instead, it suggests that the open or closed status of each reed switch is individually transmitted to the controller 134. The use of the resistor network eliminate the requirement for the multiple sensor interfaces disclosed in Mignault along with the analog to digital converter. Instead, the resistor network develops a single voltage which varies with the position of the pushing plate. There is no disclosure or suggestion of such a resistor network in Mignault.

Claim 14 is not obvious.

Claim 15.

Claim 15 depends from claim14 and specifies that the control system detects the voltage of each resistor network. As noted above, Mignault does not disclose any voltage detection, let alone voltage detection of a resistor network. It senses the open or closed status of a plurality of individual reed switches.

Claim 15 is not obvious.

Claim 16.

Independent claim 16 specifies a coin dispensing system comprising a drawer including a bottom wall connected to opposite side walls, and a plurality of spaced dividers between the opposite side walls defining a plurality of columns for supporting vertical tubes of

currency. The plurality of pushing plates are provided, one for each column. Biasing means bias each pushing plate forward. A magnet is provided on each of the pushing plates. A plurality of magnet operated switches are spaced along each column to sense the position of the associated magnet. A plurality of impedance networks are provided, one for each column, each electrically connected to the plurality of magnet operated switches for the associated column so that voltage of the impedance network varies with position of the associated pushing plate. A control system is operatively associated with the impedance networks for determining quantity of currency in the drawer.

As previously discussed, none of the references, alone or in any proper combination, results in a drawer defining a plurality of columns supporting tubes of currency in vertical orientation. Nor do they disclose pushing plates in each column with a magnet on each pushing plate used with magnet operated switches and an impedance network and control system for determining quantity of currency in the drawer.

Mignault does not disclose or suggest determining any dollar value. The stack height information can be used to determine weight in a stack represented by vertical position of each stack. Whether or not an individual stack needs to be replenished does not relate to quantity of currency in a drawer. Particularly, the claimed invention determines quantity of currency in the drawer, not stack height or weight in a particular column.

Even if the references were properly combined, the resultant combination would not relate to the claimed invention. The teaching or suggestion is not found in the references, but rather is based on applicant's disclosure.

The action equates reed switches in Mignault as part of a system of resistors having voltages and impedance throughout. There is no basis for such a conclusion, as discussed above. A reed switch is a magnet operated switch that has an on state and an off state. The reed switch can be used in numerous types of circuits. A reed switch is not inherently used in an impedance network. Indeed, Mignault discloses individual reed switches being connected to a controller through individual interface circuits. This does not suggest an impedance network or that voltage of an impedance network varies with the position of a pushing plate. The circuit is detecting an on and off state of individual switches, rather than voltage of an impedance network.

Claim 16 is not obvious.

Claim 17.

Claim 17 depends from claim 16 and specifies that the control system stores information representing value of currency in each vertical tube of currency in each column and determines quantity of currency in the drawer responsive to the sensed quantity and the stored information.

There is no disclosure or suggestion of any such control system in the references. As noted above, Mignault typically discloses transmitting stack height information for each stack. This can be used with a look up table to determine whether replenishment is required, it does not correspond to storing information representing value of currency in each vertical tube and determining quantity of currency in a drawer responsive to sensed quantity and stored information.

Claim 17 is not obvious.

Claim 18.

Claim 18 depends on claim 17 and specifies that the control system includes a display displaying quantity of vertical tubes of currency in each column and value of currency in each column.

None of the references discloses any display. At most, Mignault discloses an inventory control center. However, it does not disclose what type of information is used by the inventory control system itself, other than stack height information. Mignault does not disclose any details of the inventory control center other than it receives the stack height data.

Claim 18 is not obvious.

Claim 20.

Claim 20 depends from claim 16 and specifies that the impedance network comprises a resistor network.

As disclosed above, Mignault does not disclose any impedance network. Nor does it disclose any resistance network. It discloses individual sensor interfaces.

Claim 20 is not obvious.

GROOUND 2

Claims 5 and 10.

Claim 5 depends from claim 1 and specifies that the withdrawing means comprises a semi-cylindrical housing for receiving a vertical tube of currency and means for rotating the housing for dispensing the vertical tube of currency. Claim 10 depends from claim 7 and is generally similar with respect to defining each dispenser.

Claims 5 and 10 are rejected based on the same references as respective independent claims 1 and 7 and further in view of Carter. This rejection and the reliance on Carter are not understood. Carter is cited for displaying inventory information on a computer monitor.

In any event, Carter does not disclose or suggest the deficiencies noted above with respect to independent claims 1 and 7, let alone the condition elements recited in claims 5 and 10.

Claims 5 and 10 are not obvious.

Claim 19.

Claim 19 depends from claim 16 and specifies the dispenser for each column comprising a semi-cylindrical housing for receiving a vertical tube of currency and means for rotating the housing for dispensing the vertical tube of currency.

Similar to the above discussion of claims 5 and 10, the reliance on Carter is not understood. Claim 19 is not directed to display of inventory information. In any event, Carter does not disclose or suggest the deficiencies noted above with respect to independent claim 16.

Claims 19 is not obvious.

CLAIMS APPENDIX

1. A coin dispensing system comprising:

2 a drawer for supporting vertical tubes of currency;

means for withdrawing tubes of currency from the drawer;

4 a sensor for sensing quantity of tubes in the drawer; and

a control system operatively associated with the sensor for determining quantity of

6 currency in the drawer.

2. The coin dispensing system of claim 1 wherein the drawer comprises a

2 horizontal bottom wall connected to opposite side walls, and a plurality of spaced dividers

between the opposite side walls defining a plurality of columns for receiving vertical tubes of

4 currency.

3. The coin dispensing system of claim 2 further comprising a pushing plate

2 in each column and bias means for biasing each pushing plate toward the withdrawing means.

4. The coin dispensing system of claim 3 wherein the sensor comprises a

2 sensing element for sensing position of each pushing plate.

5. The coin dispensing system of claim 1 wherein the withdrawing means
2 comprises a semi-cylindrical housing for receiving a vertical tube of currency and means for
rotating the housing for dispensing the vertical tube of currency.

6. The coin dispensing system of claim 1 wherein the control system stores
2 information representing value of currency in each vertical tube of currency and determines
quantity of currency in the drawer responsive to the sensed quantity and the stored information.

7. A coin dispensing system comprising:

2 a drawer including a bottom wall connected to opposite side walls, and a plurality
of spaced dividers between the opposite side walls defining a plurality of columns for supporting
4 vertical tubes of currency;

a plurality of dispensers, one for each column, each for withdrawing tubes of
6 currency from an associated column;

a plurality of sensors, one for each column, each for sensing quantity of tubes in
8 the associated column; and

a control system operatively associated with the sensors for determining quantity
10 of currency in the drawer.

8. The coin dispensing system of claim 7 further comprising a plurality of
2 pushing plates, one for each column, and bias means for biasing each pushing plate toward an
associated dispenser.

9. The coin dispensing system of claim 8 wherein each sensor comprises a
2 sensing element for sensing position of each pushing plate.

10. The coin dispensing system of claim 7 wherein each dispenser comprises a
2 semi-cylindrical housing for receiving a vertical tube of currency and means for rotating the
housing for dispensing the vertical tube of currency.

11. The coin dispensing system of claim 7 wherein the control system stores
2 information representing value of currency in each vertical tube of currency in each column and
determines quantity of currency in the drawer responsive to the sensed quantity and the stored
4 information.

12. The coin dispensing system of claim 11 wherein the control system
2 includes a display displaying quantity of vertical tubes of currency in each column and value of
currency in each column.

13. The coin dispensing system of claim 7 wherein further comprising a
2 plurality of biased pushing plates, one for each column, and each sensor comprises a magnet on
one of the pushing plates and a plurality of magnet operated switches spaced along the associate
4 column to sense position of the pushing plate.

14. The coin dispensing system of claim 13 wherein the control system
2 comprises a resistor network for each column electrically connected to the plurality of magnet
operated switches for the associated column so that voltage of the resistor network varies with
4 position of the pushing plate.

15. The coin dispensing system of claim 14 wherein the control system detects
2 the voltage for each resistor network.

16. A coin dispensing system comprising:

2 a drawer including a bottom wall connected to opposite side walls, and a plurality
of spaced dividers between the opposite side walls defining a plurality of columns for supporting
4 vertical tubes of currency;

a plurality of pushing plates, one for each column, and biasing means for biasing
6 each pushing plate forward;

a magnet on each of the pushing plates;

8 a plurality of magnet operated switches spaced along each column to sense
position of the associated magnet;

10 a plurality of impedance networks, one for each column, each electrically
connected to the plurality of magnet operated switches for the associated column so that voltage
12 of the impedance network varies with position of the associated pushing plate; and

a control system operatively associated with the impedance networks for
14 determining quantity of currency in the drawer.

17. The coin dispensing system of claim 16 wherein the control system stores
2 information representing value of currency in each vertical tube of currency in each column and
determines quantity of currency in the drawer responsive to the sensed quantity and the stored
4 information.

18. The coin dispensing system of claim 17 wherein the control system
2 includes a display displaying quantity of vertical tubes of currency in each column and value of
currency in each column.

19. The coin dispensing system of claim 16 further comprising a dispenser for
2 each column comprising a semi-cylindrical housing for receiving a vertical tube of currency and
means for rotating the housing for dispensing the vertical tube of currency.

20. The coin dispensing system of claim 16 wherein the impedance network
2 comprises a resistor network.

EVIDENCE APPENDIX

There is no evidence relied on.

RELATED PROCEEDINGS APPENDIX

There are no related proceedings.

SUMMARY

None of the cited references even consider determining quantity of currency in a drawer as none of the references relate to a coin dispensing system. The fact that not a single reference is cited relating to a coin dispensing system which supports vertical tubes of currency and determines quantity of currency in a drawer, is indicative of the fact that the claimed invention is unique and is not obvious.

Reconsideration of the application and reversal of the rejections is requested.

Respectfully submitted,

Dated: June 10, 2008

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